

REMARKS

In the office action of October 11, 2006, the examiner rejected claims 15-33 under 35 U.S.C. § 102(b) as being anticipated by Hashish et al, United States Patent No. 5,700,181. It is noted that contrary to the office action, claim 20 has been previously cancelled from the present application. As hereinafter described, applicant has amended 15-19, 21-24 and 26-33 and has added claim 34 to more particularly define the invention for which protection is sought. For the reasons hereinafter described, applicant believes that all of the pending claims define over the cited reference. As such, reconsideration of the examiner's rejections is respectfully requested in view of the following comments.

Claim 15 defines a device for abrasive machining of surfaces of components. The device includes a tool having an inlet and an outlet. A supply unit conveys to the inlet a liquid in which abrasive agents are dissolved and which emerges from the outlet. A positioning means as part of the device guides the tool across a surface to be machined, and simultaneously positions the tool in such manner that the outlet faces the surface to be machined and such that an area of an annular gap defined by boundary walls of the outlet and the surface to be machined is smaller than a cross-sectional area of the inlet. In addition, claim 15 requires the cross-sectional area of the inlet to be smaller than the cross-sectional area of the outlet. As hereinafter described, such a structure is not shown or suggested in the cited reference.

The Hashish et al., '181 patent discloses an apparatus incorporating an abrasive-liquid polishing and compensating nozzle. Referring to Figs. 4-5 of the '181 patent, the apparatus polishes a glass surface by directing an abrasive fluid through the nozzle maintained in close proximity to a surface. The nozzle tip is generally funnel shaped and is wider toward the work surface for assisting transition of the fluid jet from its relatively slow moving normal direction to its high velocity tangential direction. The nozzle is slidably mounted on a support to allow a user to set a rough position relative to the work surface. However, as best seen in Fig. 4, the inlet to

Preliminary Amendment
Inventor: Oliver Fahnle
Serial No. 10/527,468
Filed: December 22, 2005
Page 7

nozzle assembly 61 is at least as big as the outlet of nozzle assembly 61 at tip 86. As hereinafter described, this arrangement constitutes a significant difference from the structure defined in claim 15.

As previously noted, claim 15 requires the cross-sectional area of the inlet to be smaller than the cross-sectional area of the outlet. Referring to page 4, lines 24-27 of the Specification, this arrangement allows for the linear (or circular) machining of a surface in along the entire region of the annular gap, not just the center of the outlet. A significant advantage over prior devices for abrasive machining of a surface, including the device disclosed in the '181 patent. Further, there is no teaching or suggesting in the cited reference to modify the cross-sectional area of the inlet of the apparatus disclosed in the '181 patent to be smaller than the cross-sectional area of the outlet.

In view of the foregoing, it is believed that claim 15 defines over the cited reference and is in proper form for allowance. Applicant wishes to point out that the subject matter incorporated into claim 15 was previously presented in cancelled claim 20 of the pending application. As such, applicant believes that consideration of amended claim 15 may be conducted without a further search.

Claims 16-19 and 21-23 depend either directly or indirectly from independent claim 15 and further define a device not shown or suggested in the art. It is believed that claims 16-19 and 21-23 are allowable as depending from an allowable base claim and in view of the subject matter of each claim.

Referring to claim 24, a device is provided for abrasive machining of surfaces. The device includes a tool having an inlet and an outlet. A supply unit conveys to the inlet a liquid in which abrasive agent are dissolved and which emerges from the outlet. A positioning means, as part of the device, guides the tool across a surface to be machined and simultaneously positions

the tool in such manner that the outlet faces the surface to be machined such that an area of an annular gap defined by boundary walls of the outlet and the surface to be machined is smaller than a cross-sectional area of the inlet. More specifically, the cross-sectional area of the inlet is greater by a factor of at least 5 than the cross-sectional area of the formed annular gap. As hereinafter described, such an arrangement is not disclosed in the cited reference.

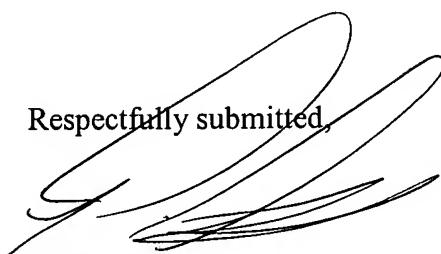
The examiner has suggested that the device disclosed in the '181 patent can position nozzle 61 such that the cross-sectional area of the inlet is greater by a factor of at least 5 than the cross-sectional area of the formed annular gap. However, the positioning means or support 91 disclosed in the '181 patent merely provides a course location for the nozzle. The position of the nozzle is actually controlled by the various hydraulic and frictional forces on the nozzle. See, Hashish et al, United States Patent No. 5,700,181, column 4, lines 55-57. As such, the device disclosed in the '181 patent does not provide a positioning means, as part of the device, the guides the tool across a surface to be machined *and simultaneously* positions the tool in such manner the cross-sectional area of the inlet of the tool is greater by a factor of at least 5 than the cross-sectional area of the formed annular gap, as required by independent claim 24. Such a structure is entirely absent from the '181 patent.

In view of the foregoing, applicant believes that claim 24 defines over the cited reference and is in proper form for allowance. Claims 26-34 depend either directly or indirectly from independent claim 24 and further define a device not shown or suggested in the art. It is believed that claims 26-34 are allowable as depending from an allowable base claim and in view of the subject matter of each claim.

Preliminary Amendment
Inventor: Oliver Fahnle
Serial No. 10/527,468
Filed: December 22, 2005
Page 9

Applicant believes the present application with claims 15-19, 21-24 and 26-34 is proper form for allowance and such action is earnestly solicited. No fees are believed to be payable with the submission of this amendment. However, the Director is authorized to charge any fees associated with this or any other communication, or credit any overpayment, to Deposit Account No. 50-1170.

Respectfully submitted,



Peter C. Stomma
Registration No. 36, 020

Date: 2/8/07

Boyle, Fredrickson, Newholm, Stein & Gratz, S.C.
250 East Wisconsin Avenue, Suite 1030
Milwaukee, Wisconsin 53202
(414) 225-9755
Attorney Docket No.: 1248.001
Customer No. 23598